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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,155	02/25/2002	Masaharu Tomobe	072982-0236	8138
22428	7590	06/29/2004	EXAMINER	
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			BRINEY III, WALTER F	
			ART UNIT	PAPER NUMBER
			2644	7
DATE MAILED: 06/29/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/081,155

Applicant(s)

TOMOBE, MASA HARU

Examiner

Walter F Briney III

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 1 is objected to because of the following informalities: Claim 1 recites the limitation "**an input current limiting register**" in line 8 of the claim, however, no registers exist in the invention. The examiner assumes for the purposes of this action that the word "**register**" was meant to be "**resistor**". Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5, 9, 13, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Bingley (US Patent 4,631,470).

Claim 1 is limited to a **telephone power source circuit for an internet protocol (IP) telephone connected to a network**. For the purposes of this action, the previous limitation will not be considered because the claims are directed toward a power supply with inrush current limiting. The fact that the circuit is used to power a telephone does not effect the structure of the device nor does it alter the breadth of claims, thus, it is an intended use. Therefore, only the limitations effecting the structure of the power supply will be considered. Bingley discloses a power supply (figure 1, element 10) that receives a **direct current** signal and uses that to charge an **input capacitor** (figure 1, element

24). Bingley further discloses a **direct-current to direct-current (DC/DC) converter** (figure 3, elements 220, 222, 224, 225, 226). The output of the inductor is feedback as a control in the charging of capacitor 24 (notice that capacitor 24 in figures 1 and 3 is the same) (i.e. **for obtaining a voltage to charge the input capacitor**). Bingley discloses a switched resistor (i.e. **input current limiting resistor**) (figure 3, element 18), which acts as an inrush limiting device (i.e. **for limiting the direct current inputted from the network**) (column 4, lines 19-22). Therefore, Bingley anticipates all limitations of the claim.

Claim 5 is limited to a **telephone power source circuit in accordance with claim 1**, as covered by Bingley. Bingley discloses a bypass transistor (i.e. **further comprising limit removing means for removing the limitation imposed by said input current limiting resistor**) (figure 3, element 30). Therefore, Bingley anticipates all limitations of the claim.

Claim 9 is limited to a **telephone power source circuit in accordance with claim 5**, as covered by Bingley. Bingley discloses a bypass transistor in parallel with the input resistor (i.e. **wherein said limit removing means is a switching transistor connected in parallel with said input current limiting resistor**) (figure 3, element 30). Therefore, Bingley anticipates all limitations of the claim.

Claim 13 is limited to a **telephone power source circuit in accordance with claim 9**, as covered by Bingley. Bingley discloses a transistor (i.e. **a driving transistor**) (figure 3, element 258) that controls the bias to transistor 30. The **driving transistor** is controlled by the voltage across capacitor 226 (i.e. **a delay circuit from**

said DC/DC converter) (column 9, line 27-column 10, line 4). Therefore, Bingley anticipates all limitations of the claim.

Claim 17 is limited to **a telephone power source circuit in accordance with claim 9**, as covered by Bingley. Bingley discloses a power supply with a bypass transistor (figure 3, element 30). The transistor is timed to turn off based on voltages measured by control units throughout the device (e.g. transistor 258). The entire device constitutes a CPU (i.e. **a central processing unit (CPU), said CPU determining control timing for turning said switching transistor on or off**). Therefore, Bingley anticipates all limitations of the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 6, 10, 14, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bingley in view of Nelson et al. (US Patent 5,973,942).

Claim 2 is limited to **a telephone power source circuit in accordance with claim 1**, as covered by Bingley. Bingley discloses a **DC/DC converter**, but does not include circuitry to power the device. Therefore Bingley anticipates all limitations of the claim with the exception of **an input voltage sensor circuit for monitoring an input voltage to said DC/DC converter**. Nelson teaches a similar DC/DC converter to that

of Bingley, however, Nelson includes circuitry for deriving power in order to operate the PWM circuitry. Nelson proposes draining current from the input capacitor at a low level, but the activation of the controlling switch Q3 does not occur until an **input voltage monitor** determines that the input capacitor is properly charged (i.e. **an output from said DC/DC converter being delayed according to a result of the monitoring by said input voltage sensor circuit**) (column 5, lines 43-56). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the circuitry to power the PWM circuitry as taught by Nelson for the purpose of providing power to the PWM circuitry wherein the method of Nelson provides the advantage of further reducing inrush current during startup by isolating the PWM circuitry from the input capacitor.

Claim 6 is limited to a **telephone power source circuit in accordance with claim 2**, as covered by Bingley in view of Nelson. Bingley discloses a bypass transistor (i.e. **further comprising limit removing means for removing the limitation imposed by said input current limiting resistor**) (figure 3, element 30). Therefore, Bingley in view of Nelson makes obvious all limitations of the claim.

Claim 10 is limited to a **telephone power source circuit in accordance with claim 6**, as covered by Bingley in view of Nelson. Bingley discloses a bypass transistor in parallel with the input resistor (i.e. **wherein said limit removing means is a switching transistor connected in parallel with said input current limiting resistor**) (figure 3, element 30). Therefore, Bingley in view of Nelson makes obvious all limitations of the claim.

Claim 14 is limited to a **telephone power source circuit in accordance with claim 10**, as covered by Bingley in view of Nelson. Bingley discloses a transistor (i.e. a **driving transistor**) (figure 3, element 258) that controls the bias to transistor 30. The **driving transistor** is controlled by the voltage across capacitor 226 (i.e. a **delay circuit from said DC/DC converter**) (column 9, line 27-column 10, line 4). Therefore, Bingley in view of Nelson makes obvious all limitations of the claim.

Claim 18 is limited to a **telephone power source circuit in accordance with claim 10**, as covered by Bingley in view of Nelson. Bingley discloses a power supply with a bypass transistor (figure 3, element 30). The transistor is timed to turn off based on voltages measured by control units throughout the device (e.g. transistor 258). The entire device constitutes a CPU (i.e. a **central processing unit (CPU), said CPU determining control timing for turning said switching transistor on or off**). Therefore, Bingley in view of Nelson makes obvious all limitations of the claim.

Claims 3, 4, 7, 8, 11, 12, 15, 16, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bingley in view of Nelson and further in view of the applicant's admitted prior art.

Claim 4 is limited to a **telephone power source circuit in accordance with claim 2**, as covered by Bingley in view of Nelson. Both Bingley and Nelson describe power supplies with input capacitors, but neither mentions the sizing of any particular components. This absence is explained by the fact that the systems are meant to be scaleable for different applications (Bingley, column 1, lines 10-25). In any case, Bingley and Nelson makes obvious all limitations of the claim with the exception

wherein said input capacitor has a capacity of about 100 μ F. The applicant has stated that in general there are at least two types of IP telephones on the market (disclosure, page 2, third paragraph). Of the two, specification B requires that the input capacity of the phone requires an input capacity between 47 and 470 μ F (page 3, first paragraph). The applicant does not specify that a capacitor of about 100 mF provides an advantage within the listed range. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a charging capacitor value of 100 μ F as taught by the applicant's admitted prior art for the purpose of allowing the general-purpose power supply of Bingley in view of Nelson to power an IP-telephone, which provides the advantage of low-cost communication.

Claim 3 is rejected for the same reasons as claim 4.

Claim 8 is limited to **a telephone power source circuit in accordance with claim 4**, as covered by Bingley in view of Nelson and further in view of the applicant's admitted prior art. Bingley discloses a bypass transistor (i.e. **further comprising limit removing means for removing the limitation imposed by said input current limiting resistor**) (figure 3, element 30). Therefore, Bingley in view of Nelson and further in view of the applicant's admitted prior art makes obvious all limitations of the claim.

Claim 7 is rejected for the same reasons as claim 8.

Claim 12 is limited to **a telephone power source circuit in accordance with claim 8**, as covered by Bingley in view of Nelson and further in view of the applicant's admitted prior art. Bingley discloses a bypass transistor in parallel with the input

resistor (i.e. **wherein said limit removing means is a switching transistor connected in parallel with said input current limiting resistor**) (figure 3, element 30). Therefore, Bingley in view of Nelson and further in view of the applicant's admitted prior art makes obvious all limitations of the claim.

Claim 11 is rejected for the same reasons as claim 12.

Claim 16 is limited to a **telephone power source circuit in accordance with claim 12**, as covered by Bingley in view of Nelson and further in view of the applicant's admitted prior art. Bingley discloses a transistor (i.e. **a driving transistor**) (figure 3, element 258) that controls the bias to transistor 30. The **driving transistor** is controlled by the voltage across capacitor 226 (i.e. **a delay circuit from said DC/DC converter**) (column 9, line 27-column 10, line 4). Therefore, Bingley in view of Nelson makes obvious all limitations of the claim.

Claim 15 is rejected for the same reasons as claim 16.

Claim 20 is limited to a **telephone power source circuit in accordance with claim 12**, as covered by Bingley in view of Nelson and further in view of the applicant's admitted prior art. Bingley discloses a power supply with a bypass transistor (figure 3, element 30). The transistor is timed to turn off based on voltages measured by control units throughout the device (e.g. transistor 258). The entire device constitutes a CPU (i.e. **a central processing unit (CPU), said CPU determining control timing for turning said switching transistor on or off**). Therefore, Bingley in view of Nelson and further in view of the applicant's admitted prior art makes obvious all limitations of the claim.

Claim 19 is rejected for the same reasons as claim 20.

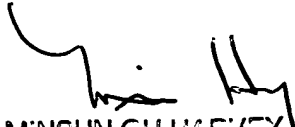
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter F Briney III whose telephone number is 703-305-0347. The examiner can normally be reached on M-F 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W Isen can be reached on 703-305-4386. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WFB
6/23/04


MINSUN G. HARVEY
PRIMARY EXAMINER